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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,037	06/24/2003	Cristian Petculescu	MSFT-1587/302202.1	1781
41505	7590	11/18/2005		
WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) ONE LIBERTY PLACE - 46TH FLOOR PHILADELPHIA, PA 19103			EXAMINER HWANG, JOON H	
			ART UNIT 2166	PAPER NUMBER

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/603,037

Applicant(s)

PETCULESCU ET AL.

Examiner

Joon H. Hwang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/24/03, 1/31/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The claims 1-48 are pending.

#### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-19 and 32-48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

“A method” in 1<sup>st</sup> line of claim 1 is non-statutory as not being **tangibly embodied** in a manner so as to be executable and is non-statutory as being an **abstract idea**. Since claims 2-10 do not add tangibility to the claimed subject matter, they are likewise rejected.

“A computer-readable medium” in 1<sup>st</sup> line of claim 11 is insufficient to render the claim **tangibly embodied** in a manner so as to be executable because “a computer-readable medium” also includes a carrier wave. See the specification section 19 on page 5. Since claims 12-19 do not add tangibility to the claimed subject matter, they are likewise rejected.

“A data structure embodied by at least one computer readable medium” in 1<sup>st</sup> line of claim 32 is insufficient to render the claim **tangibly embodied** in a manner so as to be executable because “a computer-readable medium” also includes a carrier wave. See the specification section 19 on page 5. Further, “A data structure” is non-statutory

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as being non-functional descriptive material, thus being an **abstract idea**. Claims 33-39 are likewise rejected.

"A method" in 1<sup>st</sup> line of claim 40 is non-statutory as not being **tangibly embodied** in a manner so as to be executable. Since claims 41-48 do not add tangibility to the claimed subject matter, they are likewise rejected.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Malloy et al. (U.S. Publication No. 2004/0122844).

With respect to claim 1, Malloy teaches defining a dimension comprising a plurality of attributes (i.e., a dimension metadata object is built on a plurality of attribute metadata objects, section 71 on page 4, section 74 on page 5, fig. 2, and fig. 4). Malloy teaches assigning each attribute to a respective column of the database (section 71 on page 4, section 74 on page 5, section 125 on page 9, fig. 2, and fig. 4). Malloy teaches defining relationships between the attributes (i.e., each dimension can have multiple

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hierarchies of attributes, sections 75-76 on page 5, section 86 on page 6, and sections 102 and 105-107 on page 7).

With respect to claim 2, Malloy teaches accessing the database via the dimension (i.e., a relational database is accessed via dimension, fig. 6, fig. 5, fig. 20, and section 178 on page 14).

With respect to claim 3, Malloy teaches defining at least one hierarchy comprising a sequence of the attributes (i.e., each dimension can have multiple hierarchies of attributes, figs. 12-15, sections 75-76 on page 5, section 86 on page 6, and sections 102 and 105-108 on page 7).

With respect to claim 4, Malloy teaches each hierarchy defines a drill down path for accessing the database (fig. 20 and section 178 on page 14).

With respect to claim 5, Malloy teaches a hierarchy contains one attribute (fig. 20, sections 75-76 on page 5, and section 178 on page 14).

With respect to claim 6, Malloy teaches the act of defining the at least one hierarchy is independent of the database (i.e., an attribute order of a hierarchy can be varied, thus the attribute order can be arbitrarily defined, section 111 on page 8 and fig. 15).

With respect to claim 7, Malloy teaches the act of defining relationships between the attributes is independent of the database (i.e., an attribute order of a hierarchy can be varied, thus the attribute order can be arbitrarily defined, section 111 on page 8 and fig. 15).

With respect to claim 8, Malloy teaches the database is a relational database (i.e., a relational database 140 in fig. 1).

With respect to claim 9, Malloy teaches the dimension is utilized with an on line analysis processing (OLAP) system (i.e., OLAP 100 in fig. 1, section 4 on page 1, and section 59 on page 3).

With respect to claim 10, Malloy teaches an application programming interface (API) comprising means for performing the method of claim 1 (section 59 on page 3).

Claims 11-19 are essentially the same as claims 1-9 except that it sets forth the claimed invention as a computer-readable medium rather than a method and rejected for the same reasons as applied hereinabove.

Claims 20-26 are essentially the same as claims 1-9 except that it sets forth the claimed invention as a system rather than a method, wherein for claim 20, Malloy further teaches a processor coupled to a storage device, the storage device comprising a database (fig. 29, fig. 1, and section 303 on page 21), therefore, claims 20-26 are rejected for the same reasons as applied hereinabove.

Claims 27-31 are essentially the same as claims 1-3, 6-7, and 9-10 except that it sets forth the claimed invention as a system rather than a method and rejected for the same reasons as applied hereinabove.

Claims 32-39 are essentially the same as claims 1 and 3-9 except that it sets forth the claimed invention as a data structure rather than a method and rejected for the same reasons as applied hereinabove.

With respect to claim 40, the limitations of claim 40 are similar to the limitations of claims 1 and 2 above. Malloy further teaches receiving a data retrieval request including a dimension (i.e., a SQL query including a dimension for data retrieval, fig. 20, fig. 25, section 178 on page 14, and sections 253-272 on page 18). Therefore, the limitations of claim 40 are rejected in the analysis of claims 1-2 above, and the claim is rejected on that basis.

With respect to claim 41, Malloy teaches providing the retrieved data in response to the data retrieval request (fig. 20, fig. 25, fig. 29, section 178 on page 14, and sections 253-272 on page 18).

With respect to claim 42, Malloy teaches the data retrieval request further including at least hierarchy comprising a sequence of the attributes (i.e., a drill up/down operation request, fig. 20, fig. 25, section 178 on page 14, and sections 253-272 on page 18).

With respect to claim 43, Malloy teaches each hierarchy defines a drill down path for accessing the database (fig. 20 and section 178 on page 14).

With respect to claim 44, Malloy teaches a hierarchy contains one attribute (fig. 20, sections 75-76 on page 5, and section 178 on page 14).

With respect to claim 45, Malloy teaches each sequence is defined independent of restrictions associated with the database (i.e., an attribute order of a hierarchy can be varied, thus the attribute order can be arbitrarily defined, section 111 on page 8 and fig. 15).

With respect to claim 46, Malloy teaches the relationships between the attributes are defined independent of restrictions associated with the database (i.e., an attribute order of a hierarchy can be varied, thus the attribute order can be arbitrarily defined, section 111 on page 8 and fig. 15).

With respect to claim 47, Malloy teaches the database is a relational database (i.e., a relational database 140 in fig. 1).

With respect to claim 48, Malloy teaches the database is capable of being utilized with an on line analysis processing (OLAP) system (i.e., OLAP 100 in fig. 1, section 4 on page 1, and section 59 on page 3).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 571-272-4036. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joon Hwang  
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Technology Center 2100

11/10/05